

SEMPOWSKI et al
Appl. No. 10/673,667
February 28, 2007

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REMARKS/ARGUMENTS

Reconsideration of this application and entry of the foregoing amendments are respectfully requested.

Claim 1 has been revised so as to delete the reference to "preventing" and so as to require administration of an anti-LIF antibody or fragment thereof. Claims 4, 5 and 10 have been revised so as to depend on claim 1. Claim 11 has been revised so as to be placed in independent form. New claims 16-19 find support, for example, in the paragraph bridging pages 6 and 7 of the application.

That claims have been revised should not be taken as an indication that Applicants agree with any position taken by the Examiner. Rather, the revisions have been made merely to advance prosecution and Applicants reserve the right to pursue any deleted subject matter in a continuation application.

Claim 1 stands objected to on the basis of an informality. The above-noted revision of claim 1 moots that objection.

Claims 6-9 stand withdrawn and thus no revision is believed to be necessary.

Claims 1-5 and 10-12 stand rejected under 35 USC 112, first paragraph, as allegedly lacking written description. These same claims stand rejected under 35 USC 112, first paragraph, as allegedly being non-enabled. Withdrawal of both rejections is submitted to be in order in view of the fact that claim 1 is drawn to a method of treatment and now requires administration of an anti-LIF antibody, or fragment thereof. Reconsideration is requested.

Claim 10 stands rejected under 35 USC 112, second paragraph, as allegedly being indefinite. Withdrawal of the rejection is in order in view of the above-noted revision of that claim. Reconsideration is requested.

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Claims 1-5, 10 and 12 stand rejected under 35 USC 103 as allegedly being obvious over Wang et al, in view of Jansen et al and further in view of Watanobe et al. Withdrawal of the rejection is believed to be in order for the reasons that follow.

Wang et al reports that "both Gram-negative and Gram-positive bacteria could induce thymus atrophy via apoptosis, and that TNF- α is a common denominator released and might be responsible for the thymocyte apoptosis" (see abstract) (underlining added). Jansen et al teaches that "TNF- α is an intermediate factor in the concerted release of LIF and IL-6 in vivo" and "that the enhanced elaboration of these cytokines may predict disease outcome in severe sepsis" (see abstract) (underlining added). Watanobe et al demonstrates that, in the brain and general circulation, LIF plays a role in mediating endotoxin-stimulated ACTH secretion in the rat.

The Examiner contends that it would have been obvious to combine the teachings of Wang et al with those of Jansen et al and Watanobe et al to arrive at the present method of treating gram-negative endotoxin-induced thymic atrophy by administering an anti-LIF antibody (or fragment thereof) that inhibits LIF induction of thymic corticosteroids. Applicants respectfully disagree and submit that the rejection is clearly based on improper hindsight-based reasoning. That this is the case is evident from the fact that the Examiner is silent as to where in the cited references motivation for their combination is to be found. Indeed, no such motivation exists. These references would only be combined by one having knowledge of the present invention.

The Examiner further contends that the combined teachings provide a reasonable expectation of successfully treating gram-negative endotoxin-induced thymic atrophy. The Examiner is respectfully requested to indicate where basis for such an expectation can be found in the cited documents.

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The present invention results, at least in part, from Applicants' studies designed to investigate the role of systemic and intrathymic LIF and corticosteroid production in mediating endotoxin-induced acute thymic atrophy. It was these studies that demonstrated a key pathway for gram-negative endotoxin induced thymic atrophy wherein LPS induces systemic and intrathymic corticosteroid production – a direct mediator of thymocyte apoptosis.

The Examiner is requested to reconsider the rejection in view of the above. It is believed that, having done so, the Examiner will find withdrawal of the rejection to be in order.

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

Respectfully submitted,

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